E 8120-08-P

TENNESSEE VALLEY AUTHORITY

North Alabama Utility-Scale Solar Facility Environmental Impact Statement

AGENCY: Tennessee Valley Authority.

ACTION: Issuance of record of decision.

SUMMARY: The Tennessee Valley Authority (TVA) has decided to adopt the preferred alternative identified in its final environmental impact statement (Final EIS) for the North Alabama Utility-Scale Solar Facility. The Final EIS was made available to the public on May 9, 2022. A Notice of Availability (NOA) of the Final EIS was published in the *Federal Register* on May 13, 2022. TVA's preferred alternative, analyzed in the Final EIS as the Proposed Action Alternative, consists of TVA constructing an approximately 200-megawatt (MW) alternating current (AC) solar photovoltaic (PV) facility, including an electrical substation and possibly a battery energy storage system (BESS), on an approximately 1,459-acre portion of a 2,896-acre Project Site currently owned by TVA, two miles east of Courtland in Lawrence County, Alabama. In addition, up to 150 acres on the Project Site would be maintained as species-rich native plant meadow. The Project would connect to the existing adjacent Reservation–Mountain Home 161-kilovolt (kV) transmission line (TL), which crosses the southern portion of the Project Site. The interconnection of the solar PV facility would require network upgrades on this TL in Lawrence County. This alternative would achieve the purpose and need of the Project to meet the demand for increased renewable energy generation and partially fulfill the renewable energy goals established in TVA's 2019 Integrated Resource Plan (IRP).

ADDRESSES: To access and review the Final EIS, this Record of Decision (ROD), and other project documents, go to TVA's website at https://www.tva.gov/nepa.

FOR FURTHER INFORMATION CONTACT: Elizabeth Smith, Tennessee Valley Authority, 400 West Summit Hill Drive, WT 11B, Knoxville, Tennessee 37902, 865-632-3053, esmith14@tva.gov.

SUPPLEMENTARY INFORMATION: This notice is provided in accordance with the Council on Environmental Quality's regulations (40 CFR 1500 through 1508) and TVA's procedures for implementing the National Environmental Policy Act (NEPA). TVA is a federal agency and instrumentality of the United States, established by an act of Congress in 1933, to foster the social and economic well-being of the residents of the Tennessee Valley region. As part of its diversified energy strategy, TVA produces or obtains electricity from a diverse portfolio of energy sources, including solar, hydroelectric, wind, biomass, fossil fuel, and nuclear. In June 2019, TVA completed its 2019 IRP and associated EIS. The 2019 IRP, which updated the 2015 IRP, identified the various resources that TVA intends to use to meet the energy needs of the TVA region over a 20-year planning period, while achieving TVA's objectives to deliver reliable, low-cost, and cleaner energy with fewer environmental impacts. The 2019 IRP recommends the expansion of solar generating capacity of up to 14,000 MW by 2038.

TVA entered into a two-year Purchase Option Agreement in October 2019 for the Project Site and purchased the property before expiration of the agreement in October 2021 to preserve the option of the Proposed Action Alternative in the ongoing environmental review. Since the property once acquired could be readily sold, TVA considers this land purchase to be an action that is reversible in the future.

TVA would not initiate Project-related actions on the Project Site unless the Proposed Action is selected with the issuance of the ROD. TVA would either maintain the Project Site through periodic mowing or enter into lease agreement(s) with local farmer(s) to continue agricultural operations.

TVA has prepared an EIS pursuant to NEPA to assess the environmental impacts of the Proposed Action to construct an approximately 200-MW AC solar PV facility, including an electrical substation and possibly a BESS, on an approximately 1,459-acre portion of the TVA-owned Project Site, and the interconnection of the solar PV facility to the existing Reservation–Mountain Home 161-kV TL and associated network upgrades.

Alternatives Considered: TVA considered two alternatives in the Draft EIS and Final EIS.

No Action Alternative. Under the No Action Alternative, TVA would not develop the North Alabama Utility-Scale Solar Facility at the Project Site and would pursue other actions to meet its renewable energy goals established in the 2019 IRP. TVA would retain ownership of the site until decisions on its future development and/or disposal, assessed in subsequent NEPA reviews, are made. Until that point, TVA would conduct necessary site maintenance, such as periodic inspections and mowing of parts of the site. TVA may also enter into lease agreement(s) with local farmer(s) for continued agricultural operations. TVA may implement environmental enhancement measures by establishing and maintaining the proposed species-rich native plant meadow and/or by expanding the suitable habitat for the state-listed Tuscumbia darter and the globally rare round-rib elimia, wherein TVA would thin the dense vegetative buffer along Wheeler Branch and maintain the thinned buffer. These interim activities

would follow TVA's standard best management practices and permitting requirements and would align with TVA's natural resource management policies as described in its 2020 Natural Resource Plan and EIS. Agricultural lease agreements with farmers would adhere to TVA's standards listed in its Grasslands and Agricultural Lands Management License provisions.

Proposed Action Alternative. Under the Proposed Action Alternative, TVA would construct an approximately 200-MW AC solar PV facility known as the North Alabama Utility-Scale Solar Facility, including an electrical substation and possibly a 200-MW hour (MWh) BESS. The solar PV facility, BESS, and associated 161-kV Project substation would occupy approximately 1,459 acres of a 2,896-acre Project Site located along U.S. Highway 72 Alternate approximately two miles east of the town of Courtland in northeastern Lawrence County, Alabama. The solar facility and associated components would be designed to avoid and minimize impacts to environmental resources to the maximum extent possible. In addition, up to 150 acres of the Project Site would be maintained as species-rich native plant meadow. As part of the Proposed Action, TVA may also construct a 200-MWh BESS within the 1,459-acre developed portion of the Project Site, adjacent to the Project substation. TVA would develop the facility with the intent of entering into a power purchase agreement (PPA) with a qualified company to own, maintain, and operate the facility under terms of the PPA for up to a 20-year period. The PPA would include appropriate commitments and restrictive covenants for the protection of environmental resources. At the end of the PPA term, TVA would repurchase the facility and either let the PPA expire and decommission the facility or as evaluated under separate environmental review, enter into a new PPA or choose to operate the solar facility for an additional period. The facility output would be transmitted to the

TVA electrical network via an interconnection with the existing Reservation–Mountain Home 161-kV TL, which crosses the southern portion of the Project Site. The interconnection of the solar facility would require upgrades on this TL in Lawrence County.

Purpose and Need: The purpose and need of the Proposed Action is to meet the demand for increased renewable energy generation and partially fulfill the renewable energy goals established in the 2019 IRP. TVA's preferred alternative for fulfilling its purpose and need is the Proposed Action Alternative, which would generate renewable energy for TVA and its customers with only minor environmental impacts due to the implementation of best management practices (BMPs) and minimization and mitigation efforts. Implementation of the Project would help meet TVA's renewable energy goals and would help TVA meet customer-driven energy demands on the TVA system.

Environmental Impact: Overall, environmental consequences associated with the Proposed Action Alternative would not be significant and, for the most part, would be temporary with the implementation of minimization and mitigation efforts. During construction, minor, temporary increases to noise, traffic, and health and safety risks, as well as minor, temporary effects to air quality, greenhouse gas emissions, visual aesthetics, and utilities would occur. Construction and operations would have minor, localized effects on soil erosion and sedimentation and minor, direct and indirect effects to surface waters and wetlands, floodplains, and aquatic life. These impacts would be minimized or mitigated by implementation of BMPs and specific measures designed to mitigate effects, such as thinning of dense vegetive buffer along Wheeler Branks to expand suitable habitat for the the Tuscumbia darter and the globally rare round-rib elimia and establishment and maintenance of species-rich native plant

meadow on up to 150 acres of the Project Site. Beneficial effects on socioeconomics would also occur with construction and operation of the Project.

Construction of the Project would result in impacts to approximately 14,891 linear feet (LF) of ephemeral streams for the installation of pilings to support the solar PV arrays and culverts for road crossings, 0.07 acre of wetland for the installation of a culvert for a road crossing and replacement of a TL pole structure, and 96 LF of intermittent and perennial stream disturbance for the installation of culverts for road crossings. Regulated linear ephemeral drainage features on site would be avoided to the extent practicable. Permanent fill in regulated features would be subject to Clean Water Act Section 404 and 401 permitting through U.S. Army Corps of Engineers and the Alabama Department of Environmental Management (ADEM), respectively. Additionally, in accordance with TVA and ADEM requirements, 50-foot buffers surrounding jurisdictional perennial and intermittent streams in developed portions of the Project Site would be maintained as an avoidance measure. The Project would change land uses on the Project Site from primarily agricultural to industrial. Long-term habitat loss would also occur as a result of this change in land use.

Approximately 84 acres of forest that potentially provide summer roosting habitat for endangered and threatened bats would be cleared during winter months, when bats are not likely to be present on the Project Site. The TL upgrade work would be carried out in a manner to avoid impacts to the endangered fleshy-fruit gladecress. TVA has consulted with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act, and USFWS concurred with TVA's determination that the Project may affect but is not likely to adversely affect the federally listed fleshy-fruit gladecress, gray bat, Indiana bat, and northern long-eared bat. TVA also determined

that the Project would have no effect on 14 other federally listed species that were identified as having the potential to occur on or near the Project Site.

The Proposed Action would avoid one cemetery, all 16 archaeological sites determined to be eligible for the National Register of Historic Places (NRHP), and two potentially sensitive cultural resources areas of undetermined NRHP eligibility. The Project would have visual effects to three NRHP-listed or eligible architectural resources; however, the effects would not be adverse due to modern intrusions and/or setbacks from these resources that would be maintained by the Project. Maintenance of these setbacks would also help minimize the overall visual effects of the Proposed Action. The proposed undertaking would alter the historic characteristics that qualify the proposed rural landscape district, Wheeler Station Rural Historic District (WSRHD), for the NRHP by diminishing its integrity of design, setting, materials, workmanship, feeling, and association. TVA consulted with the Alabama Historical Commission (AHC), which functions as the Alabama state historic preservation officer, and federally recognized Indian tribes under Section 106 of the National Historic Preservation Act (NHPA) regarding these findings and avoidance, minimization, and mitigation measures. TVA and AHC developed an NHPA Section 106 memorandum of agreement (MOA) to mitigate adverse effects to WSRHD to which the Project would adhere.

Decision: TVA has decided to implement the preferred alternative of the EIS, which would result in the construction, operation, maintenance, and eventual decommissioning of the proposed solar PV facility, as well as the construction, operation, and maintenance of a substation and associated facilities to interconnect the solar PV facility to TVA's existing electrical transmission network. TVA is also

considering the construction and operation of an associated 200-MWh BESS. This alternative would achieve the purpose and need of the Project.

Public Involvement: On January 30, 2020, TVA published a Notice of Intent (NOI) in the *Federal Register* announcing that it planned to prepare an EIS to address the potential environmental effects associated with building, operating, and maintaining the North Alabama Utility-Scale Solar Facility in Lawrence County, Alabama. The NOI initiated a 30-day public scoping period that concluded on March 2, 2020. The NOI solicited public input on the scope of the EIS, including alternative actions and environmental issues that should be considered in the EIS. During the public scoping period, TVA received comments from the U.S. Geological Survey, the U.S. Department of the Interior National Park Service (NPS), and six private individuals. Comments were received regarding alternatives, land use, prime farmland, water resources, biological resources, greenhouse gas emissions, cultural resources, and cumulative effects.

Draft EIS: TVA released the Draft EIS for public review in January 2021. A NOA for the Draft EIS was published in the *Federal Register* on January 29, 2021. Publication of the NOA in the *Federal Register* opened the 45-day comment period, which ended on March 15, 2021. To solicit public input, the availability of the Draft EIS was announced in regional and local newspapers serving the project area and on TVA's social media accounts. A news release was issued to the media and posted on TVA's website. The Draft EIS was posted on TVA's website, and hard copies were made available by request. During the public comment period, on February 11, 2021, TVA held a live virtual public meeting to describe the Project and address questions in a live question-and-answer session. A recording of the session was made available following the meeting for public viewing. TVA accepted comments submitted through mail, email, a comment form on TVA's public website, and during the virtual public

meeting. TVA received a total of 15 comments. These were submitted by the U.S. Environmental Protection Agency (USEPA), NPS, and 13 private individuals. Some of the comments warranted changes in the Final EIS.

Final EIS: The NOA for the Final EIS was published in the *Federal Register* on May 13, 2022. TVA received one correspondence in relation to the Final EIS. This was submitted by USEPA during the mandatory 30-day waiting period after the Final EIS was released. In its letter to TVA regarding the Final EIS, USEPA indicated that it had reviewed the Draft EIS and provided comments pertaining to endangered species and wetland impacts in a letter dated March 15, 2021. USEPA stated that the Final EIS addressed their comments.

Mitigation Measures: TVA would implement the following minimization and mitigation measures in relation to potentially affected resources and would include any of these measures that would need to be employed during operations in the terms of the PPA:

- Land Use and Visual Resources
    - Install anti-reflective PV panels to minimize or eliminate negative visual impacts from glare and reflection, and
    - Maintain existing vegetative buffer outside developed portions of the Project Site
- Geology and Soils
    - Comply with the terms of the Construction Best Management Practices Plan (CBMPP) prepared as part of the National Pollutant Discharge Elimination System (NPDES) permitting process to control soil erosion

and runoff, such as the installation of erosion control silt fences and sediment traps

- Implement other soil stabilization and vegetation management measures to reduce the potential for soil erosion during site operations
- Avoid compromising the structure integrity or altering the karst hydrology by controlled TL upgrade-related drilling and blasting within a 0.5-mile radius of documented caves

- Water Resources
  - Comply with the terms of the CBMPP prepared as part of the General Construction Stormwater NPDES permitting process to control soil erosion and runoff, such as the installation of erosion control silt fences and sediment traps
  - Establish 50-foot avoidance buffers surrounding perennial and intermittent streams and wetlands, where only non-mechanical tree and other woody vegetation removal would occur (except in limited areas for Tuscumbia darter and round-rib elimia conservation efforts)
  - Implement other routine BMPs as necessary, such as restricted herbicide application near streams, wetlands, caves and sinkholes, and proper vehicle maintenance to reduce the potential for adverse impacts to surface and groundwater resources
  - To minimize adverse impacts to floodplains and their natural and beneficial values, any fence constructed within 100-year floodplain would be designed and constructed to withstand flooding with minimal damage
  - When the facility is decommissioned and dismantled, deconstruction and demolition debris would be deposited outside 100-year floodways

- Road improvements crossing floodplains would be done in such a manner that upstream flood elevations would not be increased by more than 1.0 foot
- Avoid impacts to groundwater by controlled TL upgrade-related drilling and blasting within a 0.5-mile radius of documented caves;

- Biological Resources
  - Revegetate with native and/or non-invasive vegetation to restore habitat, including up to 150 acres of native plant meadow that would promote pollinators in the project area, reduce erosion, limit the spread of invasive species, and follow USFWS recommendations regarding biological resources and pollinator species
  - Ensure that any soil, baled hay or straw, plants and sod with roots and soil attached, soil-moving equipment, or other "Regulated Articles," as defined by U.S. Department of Agriculture, are in compliance with Animal and Plant Health Inspection Service Quarantine Regulations
  - To minimize Project effects to the state-listed Tuscumbia darter and the globally rare round-rib elimia, thin the dense vegetative buffer along Wheeler Branch to expand suitable habitat for the two species and maintain the thinned buffer during Project operation
  - Use downward facing and/or low-glare lighting to limit attracting wildlife, particularly migratory birds
  - Minimize direct impacts to some migratory birds and federally listed tree roosting bats by clearing trees in winter months (November 15 to March 15) outside of nesting season and roosting season, respectively
  - Avoid and minimize effects to caves and federally listed bats during TL upgrades:

        - Drill or blast within a 0.5 mile radius of documented caves in a manner that would not compromise the structural integrity or alter the karst hydrology of the cave
        - Avoid herbicide use within 200 feet of portals associated with caves capable of supporting cave-associated species and on surface water or wetlands unless specifically labeled for aquatic use
        - Conform to federal and state regulations and label requirements when applying herbicide to filter and buffer strips
        - Limit the clearing of vegetation within a 200-foot radius of documented caves, if needed, to hand or small machinery (e.g., chainsaws, bush-hog, mowers) to protect potential recharge areas of cave streams and other karst features that are connected hydrologically to caves
        - Conduct drilling, blasting, or other activities involving continuous noise within 0.5 miles of a cave with assumed presence of winter-roosting federally listed bats during warmer months (March 16-October 14) to avoid the winter roosting period
- Noise
    - Limit construction activities primarily to daytime hours and ensure that heavy equipment, machinery, and vehicles utilized at the Project Site meet all federal, state, and local noise requirements
- Air Quality
    - Comply with local ordinances or burn permits if burning of vegetative debris is required and use BMPs such as periodic watering, covering

open-body trucks, and establishing a speed limit to mitigate fugitive dust

- Cultural Resources
    - Adhere to setbacks from certain NRHP-eligible and listed cultural resources, and other avoidance, minimization, and mitigation measures in consultation with AHC and federally recognized tribes
    - Adhere to the following NHPA Section 106 MOA stipulations:
        - TVA would produce two copies of a traveling exhibit consisting of three to five retractable displays on African American life in late nineteenth to mid-twentieth century Lawrence County and WSRHD. One copy would be delivered to AHC, while the other copy would be used for future TVA public events within the region
        - TVA would construct a wooden fence along the eastern boundary of NRHP-listed Pond Spring to match the existing fencing along the north edge of the property and in keeping with the documented historical fencing
        - TVA would prepare updated NRHP nomination forms for Pond Spring and Bride's Hill and submit to AHC within one year of the signature of the MOA
- Waste Management
    - Dispose of wastes in approved, offsite facilities, and no new on-site waste management facilities would be developed
    - Develop and implement a variety of plans and programs to ensure safe handling, storage, and use of hazardous materials
- Public and Occupational Health and Safety

    - Emphasize BMPs in health and safety plans for site safety management to minimize potential risks
- Transportation
    - While not anticipated based on results of a traffic study, implement mitigation measures in coordination with Alabama Department of Transportation if traffic from the Project activities substantially disrupt normal traffic patterns in the area.

TVA employs standard practices when constructing, operating, and maintaining TLs, structures, and the associated right-of-way (ROW) and access roads. Routine measures that would be taken to reduce the potential for adverse environmental effects during the TL upgrade activities are as follows:

- TVA would utilize standard BMPs to minimize erosion during construction, operation, and maintenance activities associated with the transmission modifications. These BMPs are described in "A Guide for Environmental Protection and BMPs for TVA Construction and Maintenance Activities – Revision 3" (TVA's BMP Manual) and the "Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas."
- To minimize the introduction and spread of invasive species in the ROW, access roads, and adjacent areas, TVA would follow standard operating procedures consistent with Executive Order 13112 (Invasive Species) for revegetating the areas with noninvasive plant species as defined by TVA.
- Stream reaches that could be affected by the proposed activities would be protected by implementing standard BMPs as identified in TVA's BMP manual

and the "Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas."

- In areas requiring chemical treatment, only USEPA-registered and TVA-approved herbicides and other pesticides would be used in accordance with label directions designed, in part, to restrict applications near receiving waters and to prevent unacceptable aquatic impacts.
- To minimize adverse impacts on natural and beneficial floodplain values, the following mitigation measures would be implemented:
    - Construction in the floodplain would adhere to the TVA subclass review criteria for TL location in floodplains
    - BMPs as noted above, both generally and for stream reaches, would be used during construction activities
    - To the extent practicable, TL construction and maintenance activities would be scheduled during dry periods
    - Road improvements crossing floodplains would be done in such a manner that upstream flood elevations would not be increased by more than 1.0 foot
    - The TL ROW would be revegetated where vegetation is removed.

Bryan Williams,

Senior Vice President,

Generation Projects and Fleet Services.

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